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AN IMPROVED CURCULIO JARRING SHEET

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The curculio jarring sheet described in Bureau of Entomology and Plant Quarantine Circular E-355, issued June 25, 1935, has been adopted by many peach growers for collecting the plum curculio beetles jarred from the trees as a supplementary control measure. This sheet is satisfactory, except that the curculios have to be removed at frequent intervals, usually by sweeping them off into a bucket of kerosene. An improved jarring sheet, which will accelerate the operation and help retain more of the dislodged beetles than the sheet previously described, has been developed.

The essential feature of the new jarring sheet is an opening in the center, with a canvas bag attached underneath to receive and hold the curculios as they drop through. This sheet (see accompanying drawing, figure 1, for details of construction) is made by sewing together three pieces of unbleached cotton sheeting 36 inches wide and 18 feet long, after which an obtuse triangular piece of cloth (A) 18 feet long and 6 inches high at the center, plus a 1-inch allowance on the long side for a seam, is sewed to each long side of the sheet. Then the sheet is folded lengthwise and crosswise, and a triangular strip (B), 6 inches wide from the crosswise folds diagonally to a point in the center, is cut out, the sheet being thereby cut in half. The two pieces of the sheet are then placed one on top of the other and sewed together along the cut edges (C) to within 5 inches from the center. This creates necessary bagging of the sheet. The center opening (D) is made by cutting eight sectors, each radiating out  $4\frac{1}{2}$  inches from the center point of the sheet. The opening is reenforced with a piece of old  $1\frac{1}{2}$ - or  $\frac{3}{4}$ -inch rubber hose held in a circle 10 inches in diameter by a wire core. This circular hose is attached on the under side of the sheet at the center by sewing the eight sectors of cloth around it. A canvas bag closed at both ends by means of draw strings is tied in place over the bottom of the reenforced opening to receive and hold the curculios. A  $1\frac{1}{4}$ -inch by  $1\frac{1}{4}$ -inch by 10-foot wooden strip (E) is run through a hem at each 9-foot end of the sheet to serve as a handle. A hem (F) is made along each 18-foot side, through which cotton rope is passed and tied around the wooden strips at each end. The finished sheet has an area of approximately 9 feet by 18 feet. It is not necessary to use a chain across the middle of the improved sheet to hold it down, as the reenforced opening is sufficiently heavy to make it bag toward the center, which causes the curculios to roll to that point and drop through the opening into the canvas bag underneath.

The improved sheet can be rolled up into a convenient bundle when not in use and therefore can be transported easily. Two of the sheets are placed under a peach tree, and the tree is then jarred with a pole having on one end a block padded with a piece of old automobile tire. These sheets are as easy to handle in orchards as those formerly used, and the curculios, petals, leaves, and trash which collect in the canvas bag are easily and quickly removed when necessary by loosening the bottom draw string and allowing the contents to drop into a bucket of kerosene.

Tests in commercial peach orchards with the improved sheets used by laborers familiar with jarring operations have shown them to be very satisfactory. With a sharp shake or two of the sheets after each tree is jarred, all curculios readily slide down into the opening, and this prevents any of them from flying off. With these improved sheets jarring can thus be continued throughout the day, which is a distinct advantage over the old sheets, from which a number of curculios are lost by flight when jarring is continued throughout a clear, warm day. Furthermore, time is not lost in frequent stops to remove beetles, as is the case with the old sheets. In comparative tests from two to three times as many curculios per tree have been caught in the improved sheets as in the type of sheet formerly used.

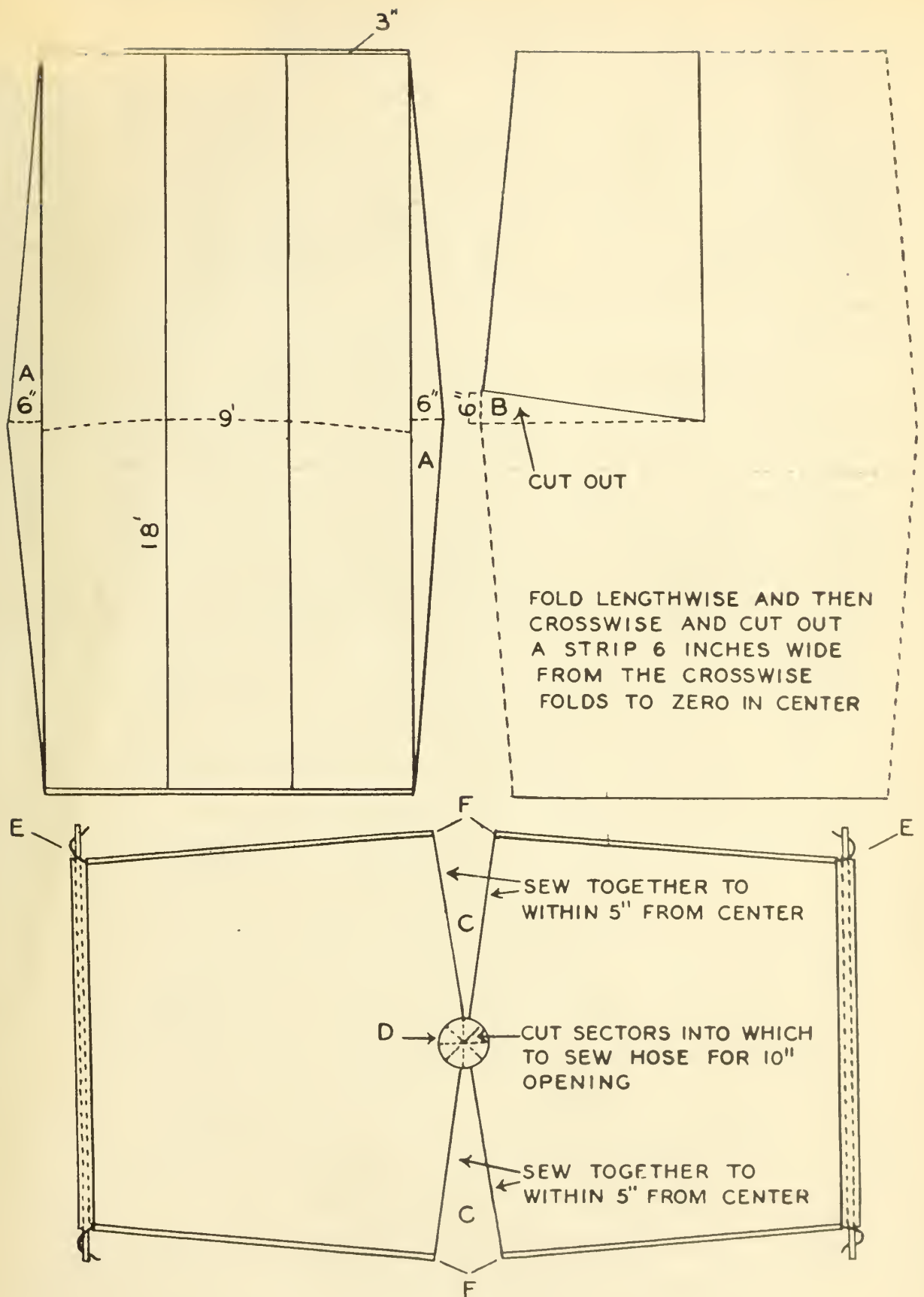


Figure 1.--Method of making improved jarring sheet.

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